

## SEQUENCE LISTING

<110> Dong, Zheng Xin

<120> Analogues of GLP-1

<130> 00537-186002

<140> US 09/857,636

<141> 2001-06-07

<150> PCT/EP99/09660

<151> 1999-12-07

<150> US 60/111,255

<151> 1998-12-07

<150> US 09/206,601

<151> 1998-12-07

<160> 415

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 30

<212> PRT

<213> Homo sapiens

<400> 1

His	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Arg		
			20					25					30		

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<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 2

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 3  
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<220>  
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<221> VARIANT  
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 (N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesulfonic  
 acid)-histidine)

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 3  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 4  
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 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
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 <223> Xaa = Na-HEPA-His  
 (N-alpha-(4-(2-hydroxyethyl)-1-piperazineacetyl)-  
 histidine)

<221> VARIANT  
 <222> 2,29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 4  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

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<210> 5
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<213> Artificial Sequence
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<223> Mutagen

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<222> 2
<223> Xaa = Aib (alpha-aminoisobutyric acid)
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<221> VARIANT
<222> 29
<223> Xaa = beta-Ala (beta-alanine)
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<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
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<400> 5
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
      1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20           25           30

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<210> 6
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
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<221> VARIANT
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<223> xaa = N-epsilon-tetradecanoyl-lysine
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<221> VARIANT
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<223> this sequence has an amidated c-terminus
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<400> 6
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20          25          30

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<210> 7
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<220>  
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 <221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine  
  
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 <223> this sequence has an amidated c-terminus  
  
 <400> 7  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
 20 25 30  
  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)  
  
 <221> VARIANT  
 <222> 32  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine  
  
 <221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus  
  
 <400> 8  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
 20 25 30  
  
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 <222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 9

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 10

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<221> VARIANT

<222> 2, 29

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<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-dodecanesulfonyl-lysine

<221> VARIANT

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<223> this sequence has an amidated c-terminus

<400> 10

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 11

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<212> PRT

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<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa =

## N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 11

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

&lt;210&gt; 12

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 30

&lt;223&gt; Xaa = 1-(4-tetradecyl-piperazine)asparagine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 12

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

&lt;210&gt; 13

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 30

&lt;223&gt; Xaa = (1-tetradecylamino)asparagine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

<400> 13  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
           1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 14  
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<221> VARIANT  
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<221> VARIANT  
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 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 31  
 <223> Xaa = beta-alanine

<221> VARIANT  
 <222>  
 <223> Xaa = this sequence has a hydroxylated c-terminus

<400> 14  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
           1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Xaa  
                   20                  25                  30

<210> 15  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

<400> 15

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20           25           30

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<210> 16

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 16

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
      20           25           30

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<210> 17

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2,29

<223> Xaa = alpha-aminoisobutyric acid

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 17

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20           25           30

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<210> 18

<211> 30

<212> PRT



<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 18

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Xaa	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 19

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<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2,29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 19

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 20

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-alanine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 20  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 21  
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<220>  
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<221> VARIANT  
 <222> 2,29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 21  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 22  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 22

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30

<210> 23  
 <211> 30  
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 <213> Artificial Sequence

<220>  
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<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

<400> 23  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30

<210> 24  
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 <213> Artificial Sequence

<220>  
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<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
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 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

<400> 24  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30

<210> 25  
 <211> 30  
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<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-alanine

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-4-(2-aminoethyl)-1-carboxymethyl-piperazine-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 25  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 26  
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<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 31  
 <223> Xaa = Ava (5-aminovaleric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = Ado (12-aminododecanoic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 26  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly

1 5 10 15  
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Xaa Xaa  
20 25 30

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<210> 27
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<223> Xaa = Ava (5-aminovaleric acid)
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<221> VARIANT
<222> 33
<223> Xaa = Ado (12-aminododecanoic acid)
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```
<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
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```

<400> 27
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1          5          10          15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Asp Xaa
      20          25          30
Xaa

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<221> VARIANT
<222> 2, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
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<221> VARIANT
<222> 31
<223> Xaa = Aun (11-aminoundecanoic acid)
```

```

<400> 28
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1           5          10
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa
          20          25          30

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<400> 29  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Xaa Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 30  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 31  
 <223> Xaa = D-Asp

<221> VARIANT  
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 <223> Xaa = Ava (5-aminovaleric acid)

<221> VARIANT  
 <222> 33  
 <223> Xaa = Aun (11-aminoundecanoic acid)

<400> 30  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
                   20                  25                  30  
 Xaa

<210> 31  
 <211> 30

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
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 <223> this sequence has an amidated c-terminus

<400> 31  
 His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 32  
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<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
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 <223> this sequence has an amidated c-terminus

<400> 32  
 His Ser Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 33  
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<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 33

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu
 1           5           10           15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
          20           25           30

```

<210> 34

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<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

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<223> this sequence has an amidated c-terminus

<400> 34

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His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
          20           25           30

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<210> 35

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<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 35

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Lys Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg

```



20

25

30

<210> 36  
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<221> VARIANT  
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<221> VARIANT  
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 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 36  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Leu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 37  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 37  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Lys Lys Xaa Arg  
 20 25 30

<210> 38  
 <211> 30  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 38

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Lys	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Leu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 39

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = D-Arg

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 39

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Xaa		
			20					25					30		

<210> 40

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 31  
 <223> Xaa = D-Arg

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 40  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg Xaa  
           20                  25                  30

<210> 41  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 21  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 41  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Xaa Phe Ile Ala Trp Leu Val Lys Xaa Arg  
           20                  25                  30

<210> 42  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT

<222> 2, 21  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29, 31  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 42  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Xaa Phe Ile Ala Trp Leu Val Lys Xaa Arg Xaa Arg  
 20 25 30

<210> 43  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 21  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29, 31  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 43  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Xaa Phe Ile Ala Trp Leu Val Lys Xaa Arg Xaa Arg  
 20 25 30  
 Arg

<210> 44  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 44

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Lys	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Lys	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 45

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 45

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Lys	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 46

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 46

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg	Gly	Arg
		20					25					30			

<210> 47

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 47

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 48

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = D-Arg

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 48

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly

```

      1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20           25           30

```

<210> 49  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

```

<400> 49
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg Arg
      20           25           30

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<210> 50  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

```

<400> 50
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Phe Leu Val Lys Xaa Arg
      20           25           30

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<210> 51

<211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 51  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Phe Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 52  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 25  
 <223> Xaa = Nal (naphthylalanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 52  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Xaa Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 53  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29



<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 22, 25

<223> Xaa = Nal (naphthylalanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 53

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Xaa	Ile	Ala	Xaa	Leu	Val	Lys	Xaa	Arg		
			20				25						30		

<210> 54

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 25

<223> Xaa = Nal (naphthylalanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 54

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Xaa	Leu	Val	Arg	Xaa	Arg		
			20				25						30		

<210> 55

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

&lt;400&gt; 55

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Phe	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

&lt;210&gt; 56

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 13, 25

&lt;223&gt; Xaa = Nal (naphthylalanine)

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 56

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Xaa	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Xaa	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

&lt;210&gt; 57

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 6, 25

&lt;223&gt; Xaa = Nal (naphthylalanine)

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 57

His	Xaa	Glu	Gly	Thr	Xaa	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Xaa	Leu	Val	Lys	Xaa	Arg		

20

25

30

<210> 58  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-decanoyl-lysine

<400> 58  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                  25                  30

<210> 59  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 59  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 60  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-dodecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 60  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 61  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 31  
 <223> Xaa = O-decanoyl-serine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 61  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg Xaa  
                   20                  25                  30

<210> 62  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 21  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29, 31  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 33  
 <223> Xaa = N-epsilon-octanoyl-lysine

<400> 62  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Xaa Phe Ile Ala Trp Leu Val Lys Xaa Arg Xaa Arg  
                  20                  25                  30  
 Xaa

<210> 63  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 31  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 63  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa  
                  20                  25                  30

<210> 64  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 31

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 64

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	
			20					25					30		

<210> 65

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 31

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 65

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	
			20					25					30		

<210> 66

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = A5c (1-amino-1-cyclopentanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 66

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Arg		
			20				25						30		

<210> 67

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 1

<223> Xaa = Tma-His (N,N-tetramethylamidino-histidine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 67

Xaa	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Arg		
			20				25						30		

<210> 68

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 31  
 <223> Xaa = Aec (4-(2-aminoethyl)-1-carboxymethyl-piperazine)  
  
 <221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus  
  
 <400> 68  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg Xaa  
 20 25 30  
  
 <210> 69  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Mutagen  
  
 <221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)  
  
 <221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)  
  
 <221> VARIANT  
 <222> 32  
 <223> Xaa = Aec (4-(2-aminoethyl)-1-carboxymethyl-piperazine)  
  
 <221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus  
  
 <400> 69  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg Gly Xaa  
 20 25 30  
  
 <210> 70  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Mutagen  
  
 <221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)  
  
 <221> VARIANT  
 <222> 29



<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 31, 32

<223> Xaa = Aec (4-(2-aminoethyl)-1-carboxymethyl-piperazine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 70

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg	Xaa	Xaa
			20				25						30		

<210> 71

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 71

His	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20				25						30		

<210> 72

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 72

His	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                                  25                                  30

<210> 73  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N-alpha-Me-His (N-methyl histidine)

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 73  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                                  5                                  10                                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                                  25                                  30

<210> 74  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N-alpha-Me-His (N-methyl histidine)

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 74  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                                  5                                  10                                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg

20

25

30

<210> 75  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N-alpha-Me-His (N-methyl histidine)

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 75  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1                    5                    10                    15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                    25                    30

<210> 76  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N-alpha-Me-His (N-alfa-methyl histidine)

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 76  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1                    5                    10                    15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                    25                    30

<210> 77  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 77  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 78  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = A5c (1-amino-1-cyclopentanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 78  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 79  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = D-Ala

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 79

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 80

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A5c (1-amino-1-cyclopentanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 80

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 81

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 24, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 81  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Xaa Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 82  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 19, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 82  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Xaa Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 83  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 10, 14  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 83  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Xaa Ser Ser Tyr Xaa Glu Gly

1	5	10	15
Gln	Ala	Ala	Lys
	Glu	Phe	Ile
	Ala	Trp	Leu
	Val	Lys	Xaa
	Arg		
20	25	30	

<210> 84  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 10, 23, 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 84
His Xaa Glu Gly Thr Phe Thr Ser Asp Xaa Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg
20 25 30

<210> 85  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 14, 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 85
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Xaa Glu Gly
1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
20 25 30

<210> 86

<211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 14  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 86  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Xaa Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 87  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 87  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Lys Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 88  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29



<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 14

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 88

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Xaa	Glu	Gly
1				5				10					15		
Gln	Xaa	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
		20					25					30			

<210> 89

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 23, 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 89

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Xaa	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
		20					25					30			

<210> 90

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 23, 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 90

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Xaa	Ala	Lys	Glu	Phe	Xaa	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 91

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 6

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 91

His	Xaa	Glu	Gly	Thr	Xaa	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 92

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 14

<223> Xaa = Cha (alpha-amino acid cyclohexylalanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

```

<400> 92
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Xaa Glu Gly
 1          5          10          15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20          25          30

```

```
<210> 93
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
```

```
<221> VARIANT
<222> 27
<223> Xaa = A6C (1-amino-1-cyclohexanecarboxylic acid)
```

```
<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
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```

<400> 93
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Xaa Lys Xaa Arg
      20          25          30

```

```
<210> 94
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2
<223> Xaa = Aib (alpha-aminoisobutyric acid)
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<221> VARIANT
<222> 10,14
<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)
```

```
<221> VARIANT
<222> 29
<223> Xaa = beta-Ala (beta-alanine)
```

```
<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
```

<400> 94

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Xaa	Ser	Ser	Tyr	Xaa	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 95  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 16  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Xaa
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 96  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 16, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Xaa
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 97  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 97

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Xaa	Ala	Lys	Glu	Phe	Glu	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 98

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 19, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 98

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Xaa	Xaa	Lys	Glu	Phe	Glu	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 99

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 19, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 10,14, 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 99

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Xaa	Ser	Ser	Tyr	Xaa	Glu	Gly
1				5				10					15		
Glu	Xaa	Xaa	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20				25						30		

<210> 100

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 100

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20				25						30		

<210> 101

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A5c (1-amino-1-cyclopentanecarboxylic acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 101

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 102

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 102

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Xaa	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 103

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 24

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 103

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Xaa	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 104

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 19

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 104

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Xaa	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 105

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 10, 23, 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)



<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 105  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Xaa Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg  
 20 25 30

<210> 106  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
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 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 106  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Xaa Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg  
 20 25 30

<210> 107  
 <211> 30  
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<220>  
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<221> VARIANT  
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<221> VARIANT

<222> 14,  
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<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 107  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Xaa Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 108  
 <211> 30  
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<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
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 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 108  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Lys Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 109  
 <211> 30  
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<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
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<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 109

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Xaa	Glu	Gly
1				5				10						15	
Gln	Xaa	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20				25						30		

<210> 110

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 23, 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 110

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Gln	Ala	Ala	Lys	Glu	Phe	Xaa	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20				25						30		

<210> 111

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 23, 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 111  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Xaa Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg  
 20 25 30

<210> 112  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT  
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<221> VARIANT  
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 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 112  
 His Xaa Glu Gly Thr Xaa Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 113  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 14

<223> Xaa = Cha (alpha-amino acid- cyclohexylalanine)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 113

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Xaa	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20				25					30			

<210> 114

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 27

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 114

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Xaa	Lys	Xaa	Arg		
			20				25					30			

<210> 115

<211> 30

<212> PRT

<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 16, 29  
<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 115  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Xaa  
1 5 10 15  
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
20 25 30

<210> 116  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2, 16  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 29  
<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 116  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Xaa  
1 5 10 15  
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
20 25 30

<210> 117  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 117

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 118

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 118

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Xaa	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 119

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT  
 <222> 2, 18  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 119  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Glu Xaa Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
 20 25 30

<210> 120  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 19  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 120  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Glu Xaa Xaa Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg  
 20 25 30



<210> 121  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 19  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 10, 14, 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 121  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Xaa Ser Ser Tyr Xaa Glu Gly  
   1                  5                  10                  15  
 Glu Xaa Xaa Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg  
                   20                  25                  30

<210> 122  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = D-Arg

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 122  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                  25                  30

<210> 123

<211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = D-Lys

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 123  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
               20                  25                  30

<210> 124  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = D-Arg

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 124  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
               20                  25                  30

<210> 125  
 <211> 30

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = D-Lys

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 125  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                  25                  30

<210> 126  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 126  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 127  
 <211> 30  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 127

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 128

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 128

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 129

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

<400> 129  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 130  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

<400> 130  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Gly  
                   20                  25                  30

<210> 131  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

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<222> 30
<223> Xaa = N-epsilon-tetradecanoyl-lysine
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<221> VARIANT
<222>
<223> this sequence has a hydroxylated c-terminus
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<400> 131
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
      1           5      10
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Xaa
      20           25      30

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<210> 132
<211> 31
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)

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<221> VARIANT
<222> 30
<223> Xaa = N-epsilon-tetradecanoyl-lysine
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<221> VARIANT
<222> 31
<223> Xaa = D-Ala
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<221> VARIANT
<222>
<223> this sequence has a hydroxylated c-terminus
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<400> 132
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
      1              5      10
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Xaa
      20              25      30

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<210> 133
<211> 32
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2,29,31
<223> Xaa = Aib (alpha-aminoisobutyric acid)
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<221> VARIANT
<222> 32
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<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has a hydroxylated c-terminus

<400> 133

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20				25					30			

<210> 134

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 31

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 32

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has a hydroxylated c-terminus

<400> 134

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20				25					30			

<210> 135

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2,29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has a hydroxylated c-terminus

<400> 135

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
			20					25					30		

<210> 136

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222> 31

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has a hydroxylated c-terminus

<400> 136

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Gly	Xaa	Xaa	
			20					25					30		

<210> 137

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine



<221> VARIANT

<222>

<223> this sequence has a hydroxylated c-terminus

<400> 137

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Gly	Xaa	Xaa	
			20				25						30		

<210> 138

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 31

<223> Xaa = Ado (12-aminododecanoic acid)

<221> VARIANT

<222>

<223> this sequence has a hydroxylated c-terminus

<400> 138

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	
			20				25						30		

<210> 139

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 31

<223> Xaa = Ado (12-aminododecanoic acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 139

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	
			20					25					30		

<210> 140  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 31  
 <223> Xaa = D- Ala

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Gly	Xaa	Xaa	
			20					25					30		

<210> 141  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

<400> 141  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly

1	5	10	15
Gln	Ala	Ala	Arg
	Glu	Phe	Ile
	Ala	Trp	Leu
		Val	Arg
		Gly	Arg
			Xaa
			Xaa
	20	25	30

<210> 142  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 31  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 32  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has a hydroxylated c-terminus

<400> 142
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Gly Arg Xaa Xaa
20 25 30

<210> 143  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 143
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                                  25                                  30

<210> 144  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 144  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                                  10                                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                                  25                                  30

<210> 145  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 145  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                                  10                                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                                  25                                  30

<210> 146  
 <211> 30

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 146  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 147  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 147  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 148  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 148  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 149  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 149  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 150  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 150  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
 20 25 30

<210> 151  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 151  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
 20 25 30

<210> 152  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 152

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20				25						30		

<210> 153

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 153

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Gln	Ala	Lys	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20				25						30		

<210> 154

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29



<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 154

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 155

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 155

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 156

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 156

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 157

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 157

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 158

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2,29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

&lt;400&gt; 158

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

&lt;210&gt; 159

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 20

&lt;223&gt; Xaa = N-epsilon-decanoyl-lysine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 159

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

&lt;210&gt; 160

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 20

&lt;223&gt; Xaa = N-epsilon-octanoyl-lysine

&lt;221&gt; VARIANT

&lt;222&gt; 29

&lt;223&gt; Xaa = beta-Ala (beta-alanine)

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 160

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 161  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 162  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>

<223> this sequence has an amidated c-terminus

<400> 162

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 163

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 163

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 164

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 164

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
      20             25             30

```

<210> 165

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 165

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
      20             25             30

```

<210> 166

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 166

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg

```

20

25

30

<210> 167  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 167  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 168  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 168  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 169  
 <211> 30  
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<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 169

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 170

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 170

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 171

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen



<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 171  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
           20                  25                  30

<210> 172  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 172  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
           20                  25                  30

<210> 173  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 173  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
 20 25 30

<210> 174  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 174  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
 20 25 30

<210> 175  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>

<223> this sequence has an amidated c-terminus

<400> 175

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
		20					25						30		

<210> 176

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 176

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
		20					25						30		

<210> 177

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 177

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                                  25                                  30

<210> 178  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 178  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                                  10                                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                                  25                                  30

<210> 179  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 179  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                                  10                                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                                  25                                  30

<210> 180  
 <211> 30

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 180  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
 20 25 30

<210> 181  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 181  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
 20 25 30

<210> 182  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 182  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                  25                  30

<210> 183  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 183  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 184  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> CONFLICT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

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<221> VARIANT
<222> 30
<223> Xaa = N-epsilon-hexadecanoyl-lysine
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```
<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
```

```

<400> 184
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20          25          30

```

```
<210> 185
<211> 32
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
```

```
<221> VARIANT
<222> 32
<223> Xaa = N-epsilon-octanoyl-lysine
```

```
<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
```

<400> 185  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa  
20 25 30

```
<210> 186
<211> 32
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Mutagen

```
<221> VARIANT
<222> 2, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
```

```
<221> VARIANT
<222> 32
<223> Xaa = N-epsilon-decanoyl-lysine
```

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 186

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
			20				25					30			

<210> 187

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 187

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
			20				25					30			

<210> 188

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 188

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



1	5	10	15
Gln	Ala	Ala	Arg
	Glu	Phe	Ile
	Ala	Trp	Leu
		Val	Arg
		Xaa	Arg
			Gly
			Xaa
	20	25	30

<210> 189  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 189																			
His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly				
1				5					10				15						
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa				
			20					25					30						

<210> 190  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 190																			
His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly				
1				5					10				15						
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa				
			20					25					30						

<210> 191

<211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 191  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
                   20                  25                  30

<210> 192  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 192  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
                   20                  25                  30

<210> 193  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 193

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20				25					30			

<210> 194

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> CONFLICT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 194

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20				25					30			

<210> 195

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 195  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
           20                  25                  30

<210> 196  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 196  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 197  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 197

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 198

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 198

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 199

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> Xaa = N-epsilon-octanoyl-lysine

<400> 199

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20           25           30

```

<210> 200  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

```

<400> 200
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20           25           30

```

<210> 201  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

```

<400> 201
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20           25           30

```

<210> 202  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 202  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30

<210> 203  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 203  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
 20 25 30

<210> 204

<211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 204  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
           20                  25                  30

<210> 205  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 205  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg



20

25

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<210> 206  
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 <220>  
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 <221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)  
  
 <221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)  
  
 <221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine  
  
 <221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)  
  
 <221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus  
  
 <400> 206  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30  
  
 <210> 207  
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 <223> Xaa = N-epsilon-octanoyl-lysine  
  
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 <221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 207

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 208

<211> 30

<212> PRT

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<220>

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<221> VARIANT

<222> 2

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<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 208

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 209

<211> 30

<212> PRT

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<220>

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<221> VARIANT

<222> 2

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<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 209

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 210

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<212> PRT

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<220>

<223> Mutagen

<221> VARIANT

<222> 2

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<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 210

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 211

<211> 30

<212> PRT

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<222> 2

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<221> VARIANT  
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<221> VARIANT  
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<221> VARIANT  
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 <223> this sequence has an amidated c-terminus

<400> 211  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30

<210> 212  
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 <212> PRT  
 <213> Artificial Sequence

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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 212  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30

<210> 213  
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<220>  
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<221> VARIANT  
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<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 213  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
           20                  25                  30

<210> 214  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 214  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
           20                  25                  30

<210> 215  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

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<221> VARIANT  
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<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 28  
<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
<222> 29  
<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 215  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Arg Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
20 25 30

<210> 216  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<221> VARIANT  
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<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 28  
<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
<222> 29  
<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 216  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Arg Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
20 25 30

<210> 217  
<211> 30

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 217  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30

<210> 218  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 218  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30

<210> 219  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 219  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
           20                  25                  30

<210> 220  
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 <213> Artificial Sequence

<220>  
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<221> VARIANT  
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<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 220  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly



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      1             5             10             15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
      20             25             30

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<210> 221
<211> 30
<212> PRT
<213> Artificial Sequence

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<220>
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<221> VARIANT
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<223> Xaa = Aib (alpha-aminoisobutyric acid)

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<221> VARIANT
<222> 29
<223> Xaa = beta-Ala (beta-alanine)

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<221> VARIANT
<222> 30
<223> Xaa = N-epsilon-tetradecanoyl-lysine

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<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus

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<400> 221
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1             5             10             15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
      20             25             30

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<210> 222
<211> 30
<212> PRT
<213> Artificial Sequence

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<220>
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<221> VARIANT
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<223> Xaa = Aib (alpha-aminoisobutyric acid)

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<221> VARIANT
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<221> VARIANT
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<223> Xaa = N-epsilon-hexadecanoyl-lysine

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<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus

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<400> 222

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
      20           25           30

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<210> 223

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 223

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
      20           25           30

```

<210> 224

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 224

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Xaa		
			20					25					30		

<210> 225

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 225

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Xaa		
			20					25					30		

<210> 226

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine  
  
 <221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus  
  
 <400> 226  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30  
  
 <210> 227  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Mutagen  
  
 <221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)  
  
 <221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)  
  
 <221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine  
  
 <221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus  
  
 <400> 227  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30  
  
 <210> 228  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Mutagen  
  
 <221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)  
  
 <221> VARIANT  
 <222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 228

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20				25						30		

<210> 229

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 229

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20				25						30		

<210> 230

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 230

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20				25						30		

<210> 231

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 231

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Lys	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20				25						30		

<210> 232

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 232  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 233  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 233  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 234  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)  
  
 <221> VARIANT  
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 <221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine  
  
 <221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus  
  
 <400> 234  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30  
  
 <210> 235  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
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 <221> VARIANT  
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 <223> this sequence has an amidated c-terminus  
  
 <400> 235  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30  
  
 <210> 236  
 <211> 30



<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 236  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 237  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 237  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Xaa Val Arg Xaa Arg  
                   20                  25                  30

<210> 238  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 238  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
           1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Xaa Val Arg Xaa Arg  
                   20                  25                  30

<210> 239  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 239  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly

1	5	10	15
Gln	Ala	Ala	Xaa
	Glu	Phe	Ile
		Ala	Trp
		Xaa	Val
		Arg	Xaa
			Arg
20	25	30	

<210> 240  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 240
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
20 25 30

<210> 241  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 241

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Xaa	Xaa	Arg		
			20				25						30		

<210> 242

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 242

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Xaa	Xaa	Arg		
			20				25						30		

<210> 243

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 243  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30

<210> 244  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 244  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30

<210> 245  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 245  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa  
                   20                  25                  30

<210> 246  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 246  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa  
                   20                  25                  30

<210> 247  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 247

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Xaa		
			20				25						30		

<210> 248

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 248

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Xaa		
			20				25						30		

<210> 249

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 249  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa  
           20                  25                  30

<210> 250  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 250  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa  
           20                  25                  30

<210> 251  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen



<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 251  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
                   20                  25                  30

<210> 252  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 252  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
                   20                  25                  30

<210> 253  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2, 29  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 26  
<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
<222> 30  
<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 253  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
20 25 30

<210> 254  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2, 29  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 26  
<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
<222> 30  
<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 254  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
20 25 30

<210> 255  
<211> 30

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 255  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Xaa Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 256  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 256  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Xaa Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 257  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 257  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Xaa Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
           20                  25                  30

<210> 258  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 258  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
           20                  25                  30

<210> 259  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 259  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 260  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220> .  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 260  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 261  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 261

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Xaa	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
		20					25					30			

<210> 262

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 262

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Xaa	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
		20					25					30			

<210> 263

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 263

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1	5	10	15
Gln	Xaa	Ala	Arg
	Glu	Phe	Ile
	Ala	Trp	Leu
		Val	Arg
		Xaa	Xaa
	20	25	30

<210> 264  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 264															
His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Xaa	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Xaa	Xaa	Arg		
		20						25					30		

<210> 265  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 265															
His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	

Glu Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                                  25                                  30

<210> 266  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 266  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                                  5                                  10                                  15  
 Glu Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                                  25                                  30

<210> 267  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 267  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                                  5                                  10                                  15  
 Glu Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                                  25                                  30

<210> 268  
 <211> 30



<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 268  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 269  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 269  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg  
                   20                  25                  30

<210> 270  
 <211> 30  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 270

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20				25						30		

<210> 271

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 271

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20				25						30		

<210> 272

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 272  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 273  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 273  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                   20                  25                  30

<210> 274  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 274  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1                    5                    10                    15  
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                  20                    25                    30

<210> 275  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 275  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1                    5                    10                    15  
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa  
                  20                    25                    30

<210> 276  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>

<223> this sequence has an amidated c-terminus

<400> 276

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20				25					30			

<210> 277

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 277

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20				25					30			

<210> 278

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 278

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		

Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 279  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 24, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 279  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Xaa Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 280  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 24, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 280  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Xaa Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 281  
 <211> 30

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<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2, 24, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
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```
<221> VARIANT
<222> 20
<223> Xaa = N-epsilon-hexadecanoyl-lysine
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<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
```

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<400> 281
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1          5          10          15
Gln Ala Ala Xaa Glu Phe Ile Xaa Trp Leu Val Arg Xaa Arg
      20          25          30

```

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<210> 282
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2, 24, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
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<221> VARIANT
<222> 28
<223> Xaa = N-epsilon-octanoyl-lysine
```

```
<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
```

```

<400> 282
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10
Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Xaa Xaa Arg
      20          25          30

```

```
<210> 283
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

<221> VARIANT  
 <222> 2, 24, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 283  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 284  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 24, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 284  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 285  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 24, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)



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<221> VARIANT
<222> 30
<223> Xaa = N-epsilon-octanoyl-lysine
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<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
```

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<400> 285
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1          5          10
Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Arg Xaa Xaa
      20          25          30

```

```
<210> 286
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Mutagen

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<221> VARIANT
<222> 2, 24, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
```

```
<221> VARIANT
<222> 30
<223> Xaa = N-epsilon-tetradecanoyl-lysine
```

```
<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus
```

<400> 286  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Arg Xaa Xaa  
20 25 30

```
<210> 287
<211> 30
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Mutagen

```
<221> VARIANT
<222> 2, 24, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)
```

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<221> VARIANT
<222> 30
<223> Xaa = N-epsilon-hexadecanoyl-lysine
```

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 287

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Xaa	Trp	Leu	Val	Arg	Xaa	Xaa		
			20				25					30			

<210> 288

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 288

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Xaa		
			20				25					30			

<210> 289

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 289

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Xaa		
			20				25					30			

<210> 290

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 290

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Lys	Xaa	Xaa		
			20				25					30			

<210> 291

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 291  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
                   20                  25                  30

<210> 292  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 292  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
                   20                  25                  30

<210> 293  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 293

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Glu	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Arg	Xaa	Xaa		
			20				25						30		

<210> 294

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 294

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Arg	Xaa	Xaa		
			20				25						30		

<210> 295

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 295  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Glu Xaa Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
 20 25 30

<210> 296  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 18, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 26  
 <223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 296  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Glu Xaa Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa  
 20 25 30

<210> 297  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 24, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 297

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Xaa	Trp	Xaa	Val	Arg	Xaa	Xaa		
		20					25						30		

<210> 298

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 24, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 26

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-tetradecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 298

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Xaa	Trp	Xaa	Val	Arg	Xaa	Xaa		
		20					25						30		

<210> 299

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 18, 24, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = A6c (1-amino-1-cyclohexanecarboxylic acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-hexadecanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 299

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Xaa	Trp	Xaa	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 300

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 1

<223> Xaa = N alfa-HEPES-His  
(N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesu  
lfonic  
acid)-histidine

<221> VARIANT

<222> 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 300

Xaa	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		



<210> 301  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-HEPES-His  
 (N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesu  
 lfonic  
 acid)-histidine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 301  
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
 20 25 30

<210> 302  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-HEPES-His  
 (N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesu  
 lfonic  
 acid)-histidine

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 302  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 303  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-HEPA-His  
       (N-alpha-(4-(2-hydroxyethyl)-1-piperazineacetyl)-  
       histidine

<221> VARIANT  
 <222> 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 303  
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 304  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-HEPA-His  
       (N-alpha-(4-(2-hydroxyethyl)-1-piperazineacetyl)-  
       histidine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 304

Xaa	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 305

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 1

<223> Xaa = N alfa-HEPA-His  
(N-alpha-(4-(2-hydroxyethyl)-1-piperazineacetyl)-  
histidine

<221> VARIANT

<222> 2

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 29

<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 305

Xaa	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

<210> 306

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 1

<223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT

<222> 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 306  
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 307  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 307  
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg  
                   20                  25                  30

<210> 308  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 308  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg

```

<400> 310
Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
      20             25             30

```

<210> 311  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 311  
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
           1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 312  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 312  
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
           1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 313  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 1  
<223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
<222> 2  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 29  
<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 313  
Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
20 25 30

<210> 314  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 1  
<223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
<222> 29  
<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 314  
Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
20 25 30

<210> 315  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 1  
<223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
<222> 2, 29  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 315  
Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
20 25 30

<210> 316  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 1  
<223> Xaa = N alfa-tetradecanoyl- histadine

<221> VARIANT  
<222> 2  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 29  
<223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 316  
Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
20 25 30

<210> 317  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>



<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-octanesulfonyl- lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 317

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 318

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = N-epsilon-dodecanesulfonyl- lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 318

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 319

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = N-epsilon-hexadecanesulfonyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 319  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
 20 25 30

<210> 320  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-octanesulfonyl- lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 320  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
 20 25 30

<210> 321  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = N-epsilon-dodecanesulfonyl- lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 321

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20				25						30		

<210> 322

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = N-epsilon-hexadecanesulfonyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 322

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20				25						30		

<210> 323

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-octanesulfonyl-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 323

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20           25           30

```

<210> 324  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-hexadecanesulfonyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

```

<400> 324
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20           25           30

```

<210> 325  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

```

<400> 325
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20           25           30

```

<210> 326  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 326  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 327  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 20  
 <223> Xaa = 1-(4-tetradecyl-piperazine)-asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 327  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                   20                  25                  30

<210> 328  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2, 29  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 20  
<223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 328  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1                   5                   10                   15  
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg  
                 20                   25                   30

<210> 329  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2, 29  
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
<222> 28  
<223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT  
<222>  
<223> this sequence has an amidated c-terminus

<400> 329  
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1                   5                   10                   15  
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                 20                   25                   30

<210> 330  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mutagen

<221> VARIANT  
<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 330

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 331

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = 1-(4-tetradecyl-piperazine)-asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 331

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 332

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 332

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 333

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 333

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 334

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus



<400> 334  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 335  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 335  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 336  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 336  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Gly Xaa  
           20                  25                  30

<210> 337  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 337  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Gly Xaa  
                   20                  25                  30

<210> 338  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-tetradecyl-piperazine)-asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 338  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Gly Xaa  
                   20                  25                  30

<210> 339  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

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<220>
<223> Mutagen

<221> VARIANT
<222> 2, 29
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT
<222> 32
<223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus

<400> 339
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Gly Xaa
          20           25           30

<210> 340
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<221> VARIANT
<222> 2, 29, 31
<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT
<222> 32
<223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT
<222>
<223> this sequence has an amidated c-terminus

<400> 340
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Xaa Xaa
          20           25           30

<210> 341
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<221> VARIANT

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<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 341

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa	Xaa	Xaa
			20				25					30			

<210> 342

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = 1-(4-tetradecyl-piperazine)-asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 342

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa	Xaa	Xaa
			20				25					30			

<210> 343

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 343

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa	Xaa	Xaa
			20				25					30			

<210> 344

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2,29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 344

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20				25					30			

<210> 345

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

&lt;400&gt; 345

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20						25					30		

&lt;210&gt; 346

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 20

&lt;223&gt; Xaa = 1-(4-tetradecyl-piperazine)-asparagines

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 346

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20						25					30		

&lt;210&gt; 347

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 20

&lt;223&gt; Xaa = 1-(4-hexadecyl-piperazine)- asparagines

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;400&gt; 347

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		

20

25

30

<210> 348  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 348  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 349  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 349  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
                   20                  25                  30

<210> 350  
 <211> 30  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = 1-(4-tetradecyl-piperazine)-asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 350

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
		20						25					30		

<210> 351

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 351

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
		20						25					30		

<210> 352

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen



<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 352  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 353  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 353  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
           20                  25                  30

<210> 354  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30  
 <223> Xaa =  
 1-(4-tetradecyl-piperazine)-acetyl)asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 354  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30

<210> 355  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220> .  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 355  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30

<210> 356  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> CONFLICT

<222>

<223> this sequence has an amidated c-terminus

<400> 356

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
		20						25					30		

<210> 357

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<400> 357

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
		20						25					30		

<210> 358

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = 1-(4-tetradecyl-piperazine)-asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 358

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1		5		10		15									
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
		20						25					30		

<210> 359  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 359
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
20 25 30

<210> 360  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-decyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 360
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
20 25 30

<210> 361

<211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-dodecyl-piperazine)- asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 361  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
                   20                  25                  30

<210> 362  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = 1-(4-tetradecyl-piperazine)-asparagines

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 362  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
                   20                  25                  30

<210> 363  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = 1-(4-hexadecyl-piperazine)- asparagines

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 363

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
		20					25					30			

<210> 364

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = 1-dodecylamino-glutamine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 364

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
		20					25					30			

<210> 365

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa = 1-dodecylamino-glutamine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 365

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20				25					30			

<210> 366

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa = 1-dodecylamino-glutamine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 366

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20				25					30			

<210> 367

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa = 1-dodecylamino-glutamine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 367

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5			10					15			
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
		20					25					30			

<210> 368

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =

N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 368

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5			10					15			
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25					30			

<210> 369

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =

N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>



<223> this sequence has an amidated c-terminus

<400> 369

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20						25					30		

<210> 370

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =

N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 370

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20						25					30		

<210> 371

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =

N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 371

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 372

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa =

N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 372

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 373

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa =

N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 373

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
 20 25 30

<210> 374  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa =  
 N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)ly  
 sine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 374  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg  
 20 25 30

<210> 375  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa =  
 N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-ly  
 sine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 375  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly

1	5	10	15										
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg
	20			25								30	

&lt;210&gt; 376

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 30

<223> Xaa =  
N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 376

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
	20							25					30		

&lt;210&gt; 377

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 30

<223> Xaa =  
N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 377

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		

20

25

30

&lt;210&gt; 378

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 30

&lt;223&gt; Xaa =

N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-lysine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 378

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

&lt;210&gt; 379

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Mutagen

&lt;221&gt; VARIANT

&lt;222&gt; 2, 29

&lt;223&gt; Xaa = Aib (alpha-aminoisobutyric acid)

&lt;221&gt; VARIANT

&lt;222&gt; 32

&lt;223&gt; Xaa =

N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

&lt;221&gt; VARIANT

&lt;222&gt;

&lt;223&gt; this sequence has an amidated c-terminus

&lt;400&gt; 379

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
			20					25					30		

<210> 380  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa =  
     N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysi  
     ne

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 380  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa  
                   20                  25                  30

<210> 381  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa =  
     N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)ly  
     sine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 381  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa  
                   20                  25                  30

<210> 382

<211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa =  
     N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-ly  
     sine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 382  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa  
           20                  25                  30

<210> 383  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29, 31  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa =  
     N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 383  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa  
           20                  25                  30

<210> 384  
 <211> 32  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =  
N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysi  
ne

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 384

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20				25					30			

<210> 385

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =  
N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)ly  
sine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 385

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20				25					30			

<210> 386

<211> 32

<212> PRT

<213> Artificial Sequence



<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =

N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 386

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20					25					30		

<210> 387

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =

N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 387

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 388

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =

N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 388

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20						25					30		

<210> 389

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =

N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 389

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20						25					30		

<210> 390

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 20

<223> Xaa =  
N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 390

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 391

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa =  
N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 391

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 392

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa =

N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 392

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
		20					25						30		

<210> 393

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa =

N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 393

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
		20					25						30		

<210> 394

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 28

<223> Xaa =  
N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 394

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
		20					25					30			

<210> 395

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa =  
N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 395

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
		20					25					30			

<210> 396

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa =  
       N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysi  
       ne

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 396  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 397  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 30  
 <223> Xaa =  
       N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)ly  
       sine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 397  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
   1                  5                  10                  15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
                   20                  25                  30

<210> 398  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
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<221> VARIANT

<222> 30  
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 N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 398  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa  
 20 25 30

<210> 399  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<221> VARIANT  
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 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa =  
 N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 399  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
 1 5 10 15  
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa  
 20 25 30

<210> 400  
 <211> 32  
 <212> PRT  
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<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa =

N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 400

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
		20						25					30		

<210> 401

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =  
N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 401

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
		20						25					30		

<210> 402

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =  
N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-ly



sine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 402

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
		20						25					30		

<210> 403

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =  
N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 403

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
		20						25					30		

<210> 404

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =  
N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)-lysi  
ne

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 404

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
		20						25				30			

<210> 405

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =

N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 405

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
		20						25				30			

<210> 406

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29, 31

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 32

<223> Xaa =

N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)-lysine

<221> VARIANT

<222>

<223> this sequence has an amidated c-terminus

<400> 406

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20					25					30		

<210> 407

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an hydroxydated c-terminus

<400> 407

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10					15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 408

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 2, 29

<223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT

<222> 30

<223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT

<222>

<223> this sequence has an hydroxydated c-terminus

<400> 408

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1	5	10	15										
Gln	Ala	Lys	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Xaa
		20						25				30	

<210> 409  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2, 29  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 31  
 <223> Xaa = Ava (5-aminovaleric acid)

<221> VARIANT  
 <222> 32  
 <223> Xaa = Ado (12-aminododecanoic acid)

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 409
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
20 25 30

<210> 410  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 2  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 29  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 31  
 <223> Xaa = N-epsilon-dodecanoyl-lysine

<221> VARIANT  
 <222>

<400> 410  
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
           1                  5                  10                  15  
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa  
                   20                  25                  30

<210> 411  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mutagen

<221> VARIANT  
 <222> 1  
 <223> Xaa = Aib (alpha-aminoisobutyric acid)

<221> VARIANT  
 <222> 28  
 <223> Xaa = beta-Ala (beta-alanine)

<221> VARIANT  
 <222> 30  
 <223> Xaa = N-epsilon-decanoyl-lysine

<221> VARIANT  
 <222>  
 <223> this sequence has an amidated c-terminus

<400> 411  
 Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln  
           1                  5                  10                  15  
 Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa  
                   20                  25                  30

<210> 412  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Exemplary motif

<221> VARIANT  
 <222> 1  
 <223> Xaa = L-His, Ura, Paa, Pta, Amp, Tma-His,  
           Des-amino-His, or deleted

<221> VARIANT  
 <222> 2  
 <223> Xaa = Ala, D-Ala, Aib, Acc, N-Me-Ala, N-Me-D-Ala,  
           or N-Me-Gly

<221> VARIANT  
 <222> 3  
 <223> Xaa = Glu, N-Me-Glu, N-Me- Asp, or Asp

<221> VARIANT  
<222> 4  
<223> Xaa = Gly, Acc, beta-Ala, or Aib

<221> VARIANT  
<222> 5  
<223> Xaa = Thr, or Ser

<221> VARIANT  
<222> 6  
<223> Xaa = Phe, Acc, Aic, Aib, 3-Pal, 4-Pal, beta-Nal, Cha, Trp, or X1-Phe

<221> VARIANT  
<222> 7  
<223> Xaa = Thr, or Ser

<221> VARIANT  
<222> 8  
<223> Xaa = Ser, or Aib

<221> VARIANT  
<222> 9  
<223> Xaa = Asp, or Glu

<221> VARIANT  
<222> 10  
<223> Xaa = Val, Acc, Aib, Leu, Ile, Tle, Nle, Abu, Ala, or Cha

<221> VARIANT  
<222> 11  
<223> Xaa = Ser, or Thr

<221> VARIANT  
<222> 12  
<223> Xaa = Ser, or Thr

<221> VARIANT  
<222> 13  
<223> Xaa = Tyr, Cha, Phe, 3-Pal, 4-Pal, Acc, beta-Nal, or X1-Phe

<221> VARIANT  
<222> 14  
<223> Xaa = Leu, Acc, Aib, Nle, Ile, Cha, Tle, Val, Phe, or X1-Phe

<221> VARIANT  
<222> 15  
<223> Xaa = Glu, or Asp

<221> VARIANT  
<222> 16  
<223> Xaa = Gly, Acc, beta-Ala, Glu, or Aib

<221> VARIANT  
<222> 17  
<223> Xaa = Gln, Asp, Asn, or Glu

<221> VARIANT  
 <222> 18  
 <223> Xaa = Ala, Aib, Val, Abu, Tle, or Acc

<221> VARIANT  
 <222> 19  
 <223> Xaa = Ala, Aib, Val, Abu, Tle, Acc, Lys, Arg, hArg, Orn, HN-CH((CH<sub>2</sub>)n-N(R<sub>10</sub>-R<sub>11</sub>))-C(O), OR NH-CH((CH<sub>2</sub>)e-X<sub>3</sub>)-C(O)

<221> VARIANT  
 <222> 20  
 <223> Xaa = Lys, Arg, hArg, Orn, HN-CH((CH<sub>2</sub>)n-N(R<sub>10</sub>-R<sub>11</sub>))-C(O), OR NH-CH((CH<sub>2</sub>)e-X<sub>3</sub>)-C(O)

<221> VARIANT  
 <222> 21  
 <223> Xaa = Glu Asp, Leu, Aib, or Lys

<221> VARIANT  
 <222> 22  
 <223> Xaa = Phe, Pal, beta-Nal, X1-Phe, Aic, Acc, Aib, Cha, or Trp

<221> VARIANT  
 <222> 23  
 <223> Xaa = Ile, Acc, Aib, Leu, Nle, Cha, Tle, Val, Abu, Ala, or Phe

<221> VARIANT  
 <222> 24  
 <223> Xaa = Ala, Aib, or Acc

<221> VARIANT  
 <222> 25  
 <223> Xaa = Trp, beta-Nal, 3-Pal, 4-Pal, Phe, Acc, Aib, or Cha

<221> VARIANT  
 <222> 26  
 <223> Xaa = Leu, Acc, Aib, Nle, Ile, Cha, Tle, Phe, X1-Phe, or Ala

<221> VARIANT  
 <222> 27  
 <223> Xaa = Val, Acc, Aib, Leu, Ile, Tle, Nle, Cha, Ala, Phe, Abu, Lys, or X1-Phe

<221> VARIANT  
 <222> 28  
 <223> Xaa = Lys, Arg, hArg, Orn, HN-CH((CH<sub>2</sub>)n-N(R<sub>10</sub>-R<sub>11</sub>))-C(O), or NH-CH((CH<sub>2</sub>)e-X<sub>3</sub>)-C(O)

<221> VARIANT  
 <222> 29  
 <223> Xaa = Gly, beta-Ala, D-Ala, Gaba, Ava, NH-(CH<sub>2</sub>)m-C(O), Aib, Acc or D-amino acid

<221> VARIANT  
 <222> 30  
 <223> Xaa = L-or D-Arg, D-or L-Lys, D-or L-hArg, D-or L-Orn, HN-CH((CH<sub>2</sub>)n-N(R<sub>10</sub>-R<sub>11</sub>))-C(O), NH-CH((CH<sub>2</sub>)e-X<sub>3</sub>)-C(O) or deleted

<221> VARIANT

<222> 31

<223> Xaa = Gly, beta-Ala, Gaba, Ava, Aib, Acc, Ado, Arg, Asp, Aun, Aec, NH-(CH<sub>2</sub>)<sub>m</sub>-C(O), HN-CH((CH<sub>2</sub>)<sub>n</sub>-N(R10-R11))-C(O), a D-amino acid, or deleted

<221> VARIANT

<222> 32

<223> Xaa = D-or L-Lys, D-or L-Arg, D-or L-hArg, D-or L-Orn, HN-CH((CH<sub>2</sub>)<sub>n</sub>-N(R10-R11))-C(O), NH-CH((CH<sub>2</sub>)<sub>e</sub>-X3)-C(O)Ava, Ado, Aec, or deleted

<221> VARIANT

<222> 33

<223> Xaa = D-or L-Lys, D-or L-Arg, HN-CH((CH<sub>2</sub>)<sub>n</sub>-N(R10-R11))-C(O), Ava, Ado, or Aec

<400> 412

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10						15	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
				20					25						30	

Xaa

<210> 413

<211> 31

<212> PRT

<213> Homo sapiens

<400> 413

His	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Arg	Gly	
			20					25					30		

<210> 414

<211> 32

<212> PRT

<213> Homo sapiens

<400> 414

His	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Arg	Gly	Arg
			20					25					30		

<210> 415

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<221> VARIANT

<222> 13

<223> Xaa = 125I radiolabeled Tyr



<400> 415  
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Xaa Leu Glu Gly  
1 5 10 15  
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg  
20 25 30